

|                               |                        |                     |  |
|-------------------------------|------------------------|---------------------|--|
| <b>Notice of Allowability</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                               | 10/680,478             | LEE ET AL.          |  |
|                               | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                               | Patrick G. Wamsley     | 2819                |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to an amendment filed on 05/23/2005.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☒ The drawings filed on 23 May 2005 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|   | 9. <input checked="" type="checkbox"/> Other <u>Replacement Drawings</u> .             |

### REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance: the references of record neither reveal nor render obvious the recited combination including arrangement of LSB and MSB transistors for a digital to analog converter, hereafter DAC, in the claimed diagonal pattern.

U.S. Patent 6,225,933 to Salter et al discloses a DAC having a memory array [1205]. U.S. Patent 6,166,670 to O'Shaughnessy shows a DAC having sets of MOS transistors. U.S. Patent 5,627,538 to Ferry provides a convolutional DAC.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick G. Wamsley whose telephone number is (571) 272-1814. The official facsimile number is (703) 872-9306. An alternate facsimile number, (571) 273-1814, should only be used for unofficial documents.



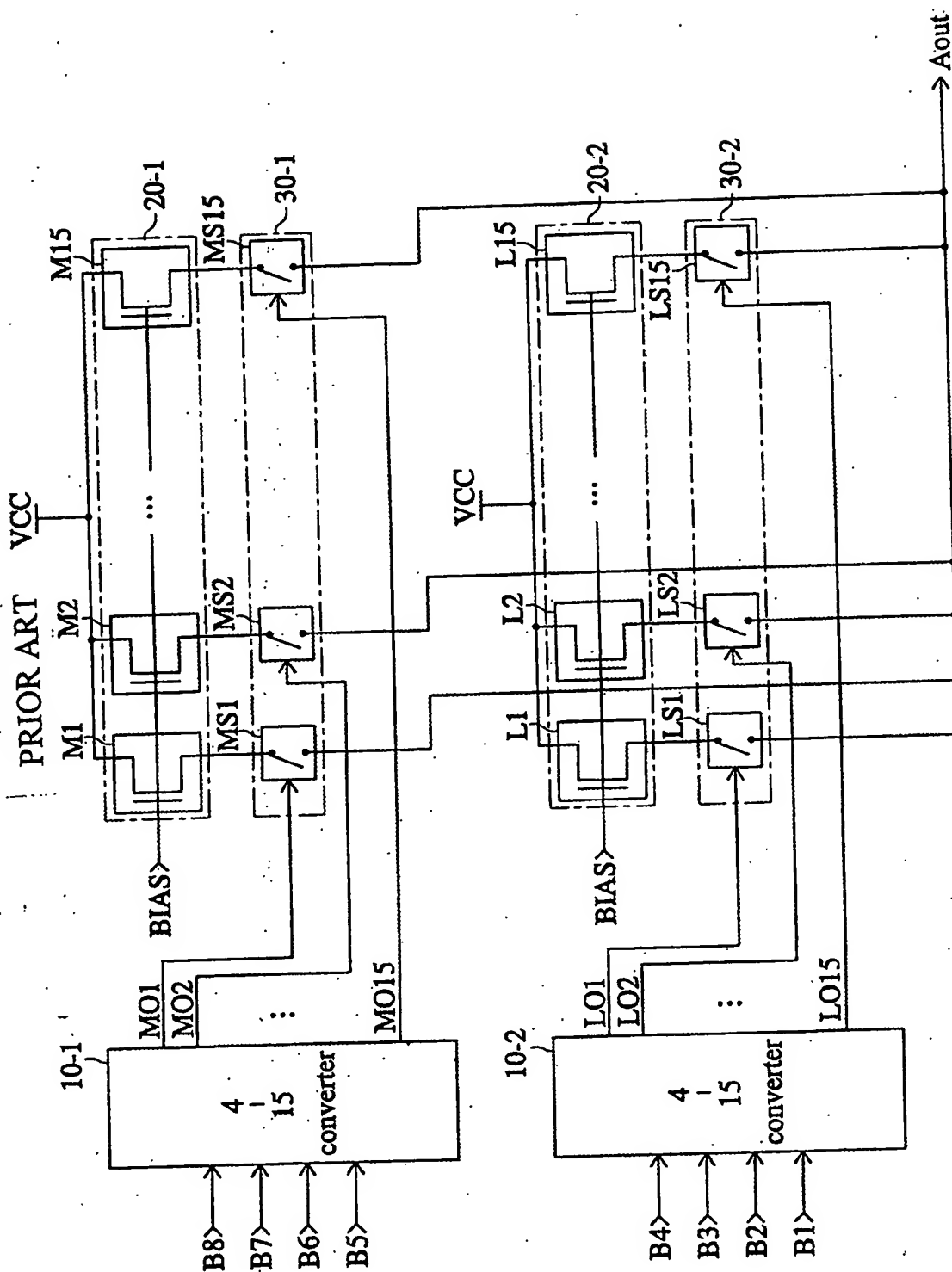
*Patrick G. Wamsley*

*May 27, 2005*



REPLACEMENT  
DRAWING

FIG. 1



# REPLACEMENT DRAWING

## FIG. 2

PRIOR ART

|       |       |       |       |       |       |       |       |       |        |        |        |        |        |        |        |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|
| T1,1  | T1,2  | T1,3  | T1,4  | T1,5  | T1,6  | T1,7  | T1,8  | T1,9  | T1,10  | T1,11  | T1,12  | T1,13  | T1,14  | T1,15  | T1,16  |
| T2,1  | T2,2  | T2,3  | T2,4  | T2,5  | T2,6  | T2,7  | T2,8  | T2,9  | T2,10  | T2,11  | T2,12  | T2,13  | T2,14  | T2,15  | T2,16  |
| T3,1  | T3,2  | T3,3  | T3,4  | T3,5  | T3,6  | T3,7  | T3,8  | T3,9  | T3,10  | T3,11  | T3,12  | T3,13  | T3,14  | T3,15  | T3,16  |
| T4,1  | T4,2  | T4,3  | T4,4  | T4,5  | T4,6  | T4,7  | T4,8  | T4,9  | T4,10  | T4,11  | T4,12  | T4,13  | T4,14  | T3,15  | T4,16  |
| T5,1  | T5,2  | T5,3  | T5,4  | T5,5  | T5,6  | T5,7  | T5,8  | T5,9  | T5,10  | T5,11  | T5,12  | T5,13  | T5,14  | T5,15  | T5,16  |
| T6,1  | T6,2  | T6,3  | T6,4  | T6,5  | T6,6  | T6,7  | T6,8  | T6,9  | T6,10  | T6,11  | T6,12  | T6,13  | T6,14  | T6,15  | T6,16  |
| T7,1  | T7,2  | T7,3  | T7,4  | T7,5  | T7,6  | T7,7  | T7,8  | T7,9  | T7,10  | T7,11  | T7,12  | T7,13  | T7,14  | T7,15  | T7,16  |
| T8,1  | T8,2  | T8,3  | T8,4  | T8,5  | T8,6  | T8,7  | T8,8  | T8,9  | T8,10  | T8,11  | T8,12  | T8,13  | T8,14  | T8,15  | T8,16  |
| T9,1  | T9,2  | T9,3  | T9,4  | T9,5  | T9,6  | T9,7  | T9,8  | T9,9  | T9,10  | T9,11  | T9,12  | T9,13  | T9,14  | T9,15  | T9,16  |
| T10,1 | T10,2 | T10,3 | T10,4 | T10,5 | T10,6 | T10,7 | T10,8 | T10,9 | T10,10 | T10,11 | T10,12 | T10,13 | T10,14 | T10,15 | T10,16 |
| T11,1 | T11,2 | T11,3 | T11,4 | T11,5 | T11,6 | T11,7 | T11,8 | T11,9 | T11,10 | T11,11 | T11,12 | T11,13 | T11,14 | T11,15 | T11,16 |
| T12,1 | T12,2 | T12,3 | T12,4 | T12,5 | T12,6 | T12,7 | T12,8 | T12,9 | T12,10 | T12,11 | T12,12 | T12,13 | T12,14 | T12,15 | T12,16 |
| T13,1 | T13,2 | T13,3 | T13,4 | T13,5 | T13,6 | T13,7 | T13,8 | T13,9 | T13,10 | T13,11 | T13,12 | T13,13 | T13,14 | T13,15 | T13,16 |
| T14,1 | T14,2 | T14,3 | T14,4 | T14,5 | T14,6 | T14,7 | T14,8 | T14,9 | T14,10 | T14,11 | T14,12 | T14,13 | T14,14 | T14,15 | T14,16 |
| T15,1 | T15,2 | T15,3 | T15,4 | T15,5 | T15,6 | T15,7 | T15,8 | T15,9 | T15,10 | T15,11 | T15,12 | T15,13 | T15,14 | T15,15 | T15,16 |
| T16,1 | T16,2 | T16,3 | T16,4 | T16,5 | T16,6 | T16,7 | T16,8 | T16,9 | T16,10 | T16,11 | T16,12 | T16,13 | T16,14 | T16,15 | T16,16 |
| ↓     | ↓     | ↓     | ↓     | ↓     | ↓     | ↓     | ↓     | ↓     | ↓      | ↓      | ↓      | ↓      | ↓      | ↓      | ↓      |
| M1    | M2    | M3    | M4    | M5    | M6    | M7    | M8    | M9    | M10    | M11    | M12    | M13    | M14    | M15    | L1-L15 |

# REPLACEMENT DRAWING

FIG. 3

PRIOR ART

